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ABSTRACT

Recently there has been concern about the apparent explosion of sexual activity among unmarried teenagers. Social policy planners have usually recommended sex education, often offered through the schools, as a means for reducing teenage pregnancy, sexually transmitted diseases, and abortion. Unfortunately there is continuing evidence that sexuality courses increase knowledge about sexual facts but do not change attitudes or behaviors. These courses have failed because they have failed to evaluate the cognitive nature of the adolescent audience they are attempting to reach. Traditional sexuality education is based on the myths that: (1) adolescents function like adults and can be expected to make logical decisions; (2) given a wide-range of choices about sexual life styles, the adolescent will choose one rationally; (3) teenagers must inevitably engage in sexual behavior; and (4) adolescents can be taught the meaning of love and will engage in responsible love-making. Using the developmental theories of Piaget, Elkind, and Erikson, it can be shown that adolescents cannot make logical decisions in the way a mature thinker can. Providing a range of choices only confuses adolescents and a logical decision cannot be assumed. Although society encourages free sexual activity, it is not inevitable for adolescents and few adolescents engage in mutually-supportive relationships. What is done in sex education courses, however, often encourages sexual activity. (Implications for curriculum development are discussed.) (ABL)

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Adolescent Cognitive Abilities and Implications for Sexual Decision-Making

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ADOLESCENT COGNITIVE ABILITIES AND IMPLICATIONS FOR SEXUAL DECISION-MAKING

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In recent years, there has been a repeated expression of concern over what appears to be the explosion of sexual activity among unmarried teenagers. The statistics in all areas are cause for concern, including increased incidence of pregnancy, sexually transmitted diseases, and abortion among teens (Alan Guttmacher Institute, 1976; Center for Disease Control, 1975; Eddigner & Forbush, 1977; Zelnick & Kantner, 1980; Zelnick, Kim & Kanter, 1979). When a means for correcting these problems has been sought, social policy planners have generally recommended sex education, usually offered through the schools.

Unfortunately, there is continuing evidence that our methods of providing intervention are not working (Zelnik & Kim, 1982). Kirby (1985), in summarizing a large amount of the current data, concludes that sexuality courses do increase knowledge about sexual facts but that there is no evidence that the courses change attitudes or behavior. Thus, although the adolescents learned more information from the courses, this had no impact on their values, attitudes, or sexual behavior. If our goal is to eliminate early sexual activity by inexperienced teenagers, then most programs are failing to meet this goal. I believe that the courses are failing because they have failed to evaluate the cognitive nature of the adolescent audience that they are attempting to reach. The courses are not designed to accommodate the needs and cognitive limitations of the adolescent population.

Berstein and Cowan (1981) have warned that adolescents are developmentally immature when questioned about their ideas on human reproduction. It is possible that we are over-estimating their abilities. It is the purpose of this paper to evaluate the cognitive developmental ability of adolescents and put this information into the context of sexuality education.

First, it will be necessary to examine the under-lying motives and goals of the current sexuality education literature. First, these courses have been developed with a specific "values-neutral" stance. The purpose is to avoid taking a stand on sensitive moral issues. Unfortunately, this orientation has resulted in the avoidance of all values statements which would give direction and purpose to the curriculum. For example, good health is certainly a value that we can all agree should be emphasized in these programs; however, it is rarely articulated as a specific goal that students should strive to incorporate into their decision-making about this issue.

Second these programs espouse the value of choice in helping adolescents to grow and mature. For example, a sex educator writes (Scales, 1981):

> "The present author believes that comprehensive sex education helps young people make personally-effective decisions about sex and relationships...." (page 557)

These authors have emphasized providing full information so that students could make educated decisions about the "life-style options" available to them in modern society (Boss & Hooper, 1980; Hacker, 1981; Macklin, 1981; Melton, 1983). The question I have is: Is it developmentally appropriate to expect adolescents to critically analyze

and evaluate their options and make correct choices, particularly in light of a values-neutral curriculum?

I intend to argue that these programs have failed because they have expected adolescents to respond in a mature manner, incompatible with their cognitive abilities. The traditional sexuality education program is based on a series of myths that make assumptions about adolescent functioning that are simply untrue. I will discuss some of these problems by pointing out what I believe to be four "myths."

MYTH #1: Adolescents function like adults and can be expected to make logical decisions. I will show that the average adolescent does not think like an adult and cannot make logical decisions in the way that the mature thinker can.

MYTH #2: Given a wide range of choices about sexual life-styles, the adolescent will choose one rationally. I will show that providing a range of choices will only confuse adolescents and that a "logical" decision cannot be assumed.

MYTH #3: Teenagers must inevitably engage in sexual behavior. Obviously this is not true. Although without doubt our society does everything to encourage free sexual activity, it is not inevitable. I will show that much of what we do in sex education actually encourages rather than discourages sexual activity in our children.

MYTH #4: Adolescents can be taught the meaning of love and will engage in responsible love-making. I will argue that very few of them will engage in fully reciprocal, mutually-supportive relationships.

I will make my case using the development theories of Jean Piaget, David Elkind and Erik Erikson. If we examine Piaget's position on the developmental capabilities of teenagers, we will find that teenagers have a very limited ability to make decisions and a superficial understanding of their sexual relationships. These limitations will prevent the teenager from taking proper advantage of sexuality education. We will first analyze Piaget's developmental theory, and then apply it to the decision-making behavior of teenagers, specifically in the areas of decisions about sexual activity. I will end by

suggesting some ways to counter the current trends, with the hope of ending the increase of early teenage sexuality.

Piaget has theorized (Ginsburg & Opper, 1979) that human development is a biological process that proceeds in an orderly and organized manner through specific predetermined stages. Each stage is characterized by a unique way of interacting with the environment. The interaction process is governed by the internal abilities of the person and the environmental demands placed on the individual. When a person perceives that the environmental demands cannot be met because of limited understanding, two options are available. In the first option, the person responds to the environmental demand by changing the environment itself, that is, he distorts it to fit his own personal perception.

For example, a child who has worked very hard to build a block city may be very upset when another child runs through it and destroys it. To the adult, it is obvious that the destructive child is not acting purposefully. It is clear that he does not intend to destroy another child's creations, rather he has blundered into it because he is awkward and not well coordinated. However, since the preschool child is incapable of understanding the concept of intentions, he is unable to conceive of someone elses intentions. The fact that "he didn't mean to do it", means nothing to the preschool child. Rather, he will cognitively distort the environmental reality and perceive the child as guilty of intentional, destructive tendencies. He will probably react by physically punishing his companion and no efforts on the part of the teacher to convince him that the child "didn't mean to do it," will

satisfy the wronged child. He will simply not understand what the teacher is talking about.

This process is referred to as assimilation by Piaget, because the organism assimilates the event by distorting it and without changing himself. However, he has a second option. He can accommodate himself to the situation by changing his own structures. At some point in the child's interactions, he will change his own structures to accurately interpret the environment. In this kind of interaction, he will

Environment touches person:

1. ASSIMILATION = Person distorts the environment.
2. ACCOMMODATION = Person changes to match the environment.

perceive, for the first time, the fact that his friend is not being intentionally mean. Once this knowledge is acquired, the child will use it extensively. Some parents may claim that it is over-used. The notion that "it was an accident" is used to exempt him from all indiscretions. At a later developmental level, he will acquire structures that allow him to take responsibility for all his behavior, and he will act to rectify injustice, even if it occurred inadvertently. Thus, with increasing development, the child acquires the ability to interact in more mature and effective ways with his environment. Piaget assumes that everyone seeks to maintain an effective adaptation with his social environment. It is the need for balance that Piaget calls equilibration, which works through the process of assimilation and accommodation.

Maturity, according to this theory, is based on increasingly effective ways of processing the environment and reacting to it. It is

the way a person thinks about environmental events that is important to determining developmental level. Thus, young children think differently than adults. Their interactions with the environment produce different understandings of the same event. In the preschool example, the adult perceived an accident followed by unfair retribution. The child perceived intentional viciousness followed by just punishment.

As adults, we are frequently aware of this disparity in thinking about events which characterizes the thinking of young children. However, when children reach the adolescent years, we tend to think of them as adults. We assume that they are processing information in the same way as we are. We do not take seriously the obvious difference of opinion that occurs so often between adolescents and adults. When we design our courses in sex education, we never consider the possibility that they will learn something different than we intend. In fact, adolescents will assimilate this information to suit their own inner needs and understandings. The courses will inevitably meet the needs of the students; but I will argue that this is a different outcome than we, as adults, intend.

PIAGET'S STAGES
Sensorimotor 0-2 years
Preoperational 3-6
Concrete operational 7-11
Formal Operational 12 ---

According to Piagetian theory, there are four stages: sensorimotor, preoperational, concrete operational, and formal operational. The adolescent in our culture is in the stage of concrete operations. During adolescence, the final shift to formal operations begins. This will be the preparation for the last stage of cognitive

development, which is assumed to be the one used by most adults. Although it is theoretically possible for an adolescent to be functioning in formal operations, it is not common (Chapman, 1975; Dulitt, 1972; Mortano, 1977). Thus, in order to understand how most adolescents think, it is necessary for us to understand the characteristics of the concrete operational stage.

Thinking processes are analyzed by providing the adolescent with a problem to solve. The methods that are used in thinking through the solution are examined to determine the presence of the thinking process. One such problem is the combinatorial problem using chemicals. The student is shown bottles of clear liquid and told that when a certain

Chemicals:	#1 #2 #3 #4 #5 (combine them)
I.	1+2, 1+3, 1+4, 1+5, 2+3, 2+4, 2+5, etc.
II.	1+2+3, 1+2+4, 1+2+5, etc.

combination of chemicals is put together, a yellow precipitate occurs. Their task is to discover which particular combination of chemicals provides the correct outcome. To solve the problem requires formal operational thinking and the concrete operational thinker will tend to fail it for a number of reasons.

CONCRETE OPERATOR

Overwhelmed by immediate concrete experience.
Cannot anticipate future outcome.
Processes in haphazard way.

First of all, the concrete operator is overwhelmed by his immediate experiences. He cannot anticipate all possible outcomes. He thinks in very concrete terms so that he cannot imagine an outcome with

which he has no direct contact. It requires formal, abstract thinking to create meaningful concepts of events that have not been experienced personally. In addition, the concrete operator cannot generate meaningful questions about problems that must be solved (Legendre-Bergeron & Laveault, 1983).

It is necessary to establish a systemmatic plan for trying out all possible combinations (one with all others, two with all others, etc., which is depicted in I in the table). This plan allows the student to follow each step and to know what the next step will be. The concrete operator fails to formulate a plan to guide the experiment. He tends to begin in a haphazard way and proceed randomly. He forgets what combinations he has tried and fails to recognize the ones he has forgotten. He never knows which combinations he has missed.

He also tends to think in terms of main effects. He does not think of the possibility of complex interactions, such as three-way effects, which are represented by II in the table. It may never occur to him to attempt a 3-solution combination. He cannot systemmatically analyze the data, synthesize it, and come to a rational conclusion.

FORMAL OPERATOR

Anticipates possible outcomes.
Weighs value of each outcome.
Tests systemmatically.
Considers complex interactions.
Associates behavior with outcome.

More mature individuals are more likely to associate cause of their actions with specific effects. They can identify more kinds of causes and can anticipate the outcomes. They are able to produce more alternatives and the ones they produce are more relevent to their immediate problem. They are more likely to anticipate the outcomes of

their actions (Spinock, Platt & Shure, 1976). The same kinds of reasoning are used in the area of sexual decision-making.

This brings us back to Myth #1: Adolescents function like adults. There is abundent evidence to indicate that most adolescents have not yet reached the level of mature adult reasoning. The limitations which occur in "scientific" problem-solving are no less severe in the area of of sexual problem-solving. Unfortunately, the results of the reasoning process in the latter area is much more damaging to the adolescent.

Unfortunately, most programs for sexual education emphasize an unbiased, open attitude toward all kinds of sexual practices. The people who design such programs pride themselves on offering "choices" for adolescents. All "options" are laid before the young person, who is then encouraged to make a "logical decision." The adults who design these programs usually assume that the adolescent will weigh all the negative aspects of premarital sexuality and decide against it; if they do choose to engage in premarital sex, that they will do so in a "logical" way (that is by using effective contraception). Our statistics indicate that this is not what usually happens. Typically, the adolescent goes on a date, planning to be "good." However, the pressure of the desire for sexual activity takes over. When a "logical" concern is expressed about needing some protection, the immediate concrete gratification of sexual needs have much more salience to the average teen. One has great difficulty in imagining a learned conversation on the merits of contraception at such a time.

The final fallacy of this approach is that the adolescent is not capable of making such a rational decision, even under better circumstances. He cannot systemmatically weigh and evaluate all of

these options; and he cannot imagine himself in any of the negative situations. The idea of an unwanted pregnancy or veneral disease is simply too far removed from his concrete experience. Even if he knows others who have suffered these tragedies, he cannot put himself in their place.

Decision about sexual activity

CONCRETE OPERATOR
Immediate sexual gratification
Future risks disregarded
Options not evaluate
Responsibility for actions not evaluated

Let us apply the thinking strategies of the average adolescent to the problem of sexual decision-making. Is the concrete operator capable of anticipating all possible outcomes? He simply can't have a true appreciation of the meaning of being sick with veneral disease. Is it as bad as having the chicken pox? What is it really like to have full responsibility for a baby? How will I really feel if I have to miss high school graduation to have my baby? What is it like to feel guilty about a baby that has been aborted? Adolescents, by and large, are too concrete and immediate in their thinking to deal adequately with these questions.

Is the concrete operator capable of accurately weighing the impact of each outcome? Which of these is more important? Is it a greater sin to use contraception or have an abortion? It is worse to miss graduation or to suffer guilt from having an abortion? It is worse to give up the pleasure of the sexual contact or to suffer the pain of venereal disease. Because of the concreteness of the adolescent, the immediate gratification will loom largest as the most important problem.

It is impossible for them to anticipate that having venereal disease is worse than giving up the momentary experience of sexual pleasure.

Can the concrete operator establish a systemmatic plan for evaluating each outcome? It is likely that the evaluation process will be random, confused, and disorganized. It is likely that the adolescent will demonstrate a kind of overload and find the process confusing and not helpful. They will behave as though they don't know what they want. Or they will change their opinion from day to day.

Can the concrete operator take account of complex interactions? Adolescents very rarely take account of the important people in their life. They tend to expect that their actions will have little fall-out on parents, peers, etc. Clearly, their sexual decisions affect everyone; and those secondary relationships result in all kinds of complex interactions, so that no decision has a simple one-way effect. In addition, the decision will always have a reciprocol effect on the girl. If she engages in premarital sex, has a baby, or has an abortion, all of these results will effect how society views her and will change the course of her life. These reciprocol effects are very difficult for the average adolescent to imagine and respond to.

Finally, does the concrete operator truly associate today's behavior with tomorrow's outcome? Are they willing to take responsibility for their decisions in such a way as to show that they understand that they have caused a particular event? Clearly, this is the way in which most parents see the immaturity of their adolescent children. They know that the kids simply don't feel ultimately responsible for their actions. The boy says, "The baby isn't my problem, let her worry about it." The girl says, "Why should I have to

be burdened by caring for a child I don't want." They find it difficult to take responsibility for the outcomes that they have had a responsibility in forming due to their decision-making. Of course, this is partly due to the fact that they are not conscious of making a decision: "It just happened."

All of these patterns result in a characteristic way of behaving for adolescents, which Elkind (1967) has described as the "personal fable". This is the image the adolescent has of himself as living a fabled life: the one in which no tragedy can occur. Unwanted pregnancies are things that happen to other people. He believes that these routine events could never happen to him because he is "special." He has become aware of himself as an absolutely unique and special individual and over-generalizes this, so that he feels that the law of averages couldn't possibly apply to him. If you ask a pregnant teenager why she didn't use contraception, her most likely answer will be that she just didn't believe that it would happen to her. Every study of contraceptive use among adolescents has found that this attitude pervades the thinking of teenagers (for example, Cobliner, 1974; Lewis, 1980; Needle, 1977; Shah, Zelnik & Kantner, 1975; Zelnick & Kantner, 1978).

Decision about sexual activity
FORMAL OPERATOR

Considers future risks
Recognizes the significance of
all possible risks
Recognizes that sexual activity
entails responsibilities

In the last analysis, the concrete operational adolescent doesn't have the necessary intellectual abilities to reason in a rational way.

He responds to the concrete reality which is that human sexuality is wonderfully pleasurable. The concrete pleasure of the sexual encounter completely overwhelms any logical reasons for not doing it. Why suffer now, when the potential negative results are so distant, vague, and difficult to conceptualize? For the adolescent, there is no choice; and the outcome is inevitable; he would be a fool to refrain. And this is exactly the argument that seduces anyone reluctant enough to try to use some of the "logical" reasons just discussed in sex-ed class.

The formal operator will handle these decision much more effectively. The mature person will anticipate all of the difficult outcomes. He will weigh these and be capable of realizing that the long-term results will have a greater impact on his life. He will evaluate each one taking account of complex interactions. He recognizes that he must take responsibility for his actions, including any child which may occur as a result of the decision to engage in sexual behavior.

Thus, we see why Myth #2 cannot possibly be true: Given a wide range of choices about sexual lifestyles, the adolescent will choose one rationally. Clearly, the term rational is completely inadequate in this context. The adolescent is simply too limited to function in a protective way when dealing with sexual decisions.

If the adolescent can't make use of formal operational reasoning, he must have something to reason with. He cannot function in a vacuum. What resources does he fall back on in the absense of "logic?" This question can be answered most effectively by looking at Kohlberg's theory of moral development. Kohlberg has developed a stage system of analyzing the developemnt of moral reasoning (Kohlberg, 1969). He has

observed six levels of moral reasoning, based on the type of reasoning a person uses to make moral decisions:

1. Might makes right: fear of punishment controls action
2. Hedonism: opporuntity for pleasure controls action
3. Social acceptance: value by respected others controls action
4. Role of law: following the rule controls actions
5. Contractual: human responsibilities control action
6. Principled: system of higher principles controls action

Research has demonstrated that adolescents rarely function above the fourth level (Kohlberg, 1964). Each of the first four areas can be applied to sexual decision-making.

The first, and the most primitive, is that of reasoning based on power: might has right on its side. In a sexual context, this would essentially be rape. The second is the hedonistic level: you scratch my back, I'll scratch yours. In the sexual area, this concept is expressed as the "Playboy Philosophy: of, "if it feels good, do it." The third level is based on the social pressure to achieve social acceptance. Adolescents are apt to take the position that sexual activity is acceptable if it seems to be widely practiced by the peer group. The fourth level recognizes the word of law. At this level, social laws are valued for encouraging organized behavior systems. Adolescents are apt to fall back on the peer approval and legal prescriptions as the basis for the decision.

When we look at modern society, what guidelines do we see for the adolescent to use in making a decision? Clearly, our society virtually encourages sexual activity for its hedonistic value. Certainly TV and

the magazines would encourage a level 2 response to sexual activity. When society and peers appear to contribute to the over-riding notion that sexual activity is expected and admirable, is it any wonder that adolescents simply say, "Everyone is doing it"? Furthermore, when we look at the role that the law plays, there is great reason for concern. The legalization of abortion has provided adolescents with the perfect excuse for "taking a chance." Not only is it legal, cheap, and supposedly easy; but it is ready and waiting as a form of birth control. And since the laws protect the "right of privacy" of the adolescent to make the decision without parental involvement, the inducement is that much stronger. Research shows that adolescents with unplanned pregnancies are fully aware of the legal situation (Lewis, 1980).

Thus, our society plays right into the immature thinking of adolescents by allowing them to use reasons that make the decision logical and reasonable from their perspective. It is really a wonder that any adolescent refrains from sexual activity.

Thus Myth #3: Teenagers must inevitably engage in sexual behavior is clearly a product of immature, adolescent reasoning. It is inevitable for many adolescents because the society provides the support and encouragement to do it. The inevitability fades in the face of mature reasoning and principled thinking. The truly adult world must reassert itself against adolescent thinking.

If the adolescent does engage in premarital sexuality, what effect does this have on him? How does he interpret human sexual relations? Since his structures are different from those of adults, what is his understanding of sexuality and how does he use it?

The adolescent is in the process of consolidating concrete operational thinking and begining the phase of formal thought. At the begining of formal abilities, the adolescent begins to be aware of his own abilities to feel and think. This sets up the new phase, referred to by Elkind (1967) as adolescent egocentrism. During this phase, the young person becomes totally involved with the adventure of discovering himself. This has been generally referred to as the search for identity. This search becomes so overwhelming that it prevents the adolescent from having a clear understanding of the intentions and needs of others. That is to say, the average adolescent has difficulty truly understanding the needs of others.

For example, teenagers are often so self-conscious that they believe others will see exactly what they see in themselves. So the appearance of a new pimple may make an adolescent so overwhelmed with discomfort that he believes everyone sees it as clearly as he does, and interprets it in as negative terms as he does. Its presence will cause him to be shy and uncomfortable in social situations. Yet his companions may never have noticed the new blemish. He assumes that everyone else will take it as seriously as he does.

Every action is carried out in order to see how others respond to it. Clothes are chosen to see what response they will bring in others (shock, approval, envy, etc.), not necessarily how effective they look. The same system applies in interpersonal relations. The date to the school prom is chosen to enhance prestige with the group and to boost the ego. Dating during the adolescent years is carried out more to discover the identity of the self, then of the date.

The young couple will spend hours preparing for the evening out. The clothes will be carefully chosen and the hair correctly combed. And when these young people meet, they will look into each other's eyes and see---not the other person, but the response to all the effort they have made, like looking into a mirror, they see only themselves. They both have a need to receive affirmation. They have no understanding of a mutual relationship or of giving of themselves in unselfish love. However, this is entirely appropriate, since it is the developmental task to come to a better understanding of self. Once the self is fully grasped, it is then possible to establish a truly mature, mutual relationship with another person.

This capacity has been defined by Erik Erikson (1963). He argues that the developmental crisis for the adolescent is one of establishing identity. The adolescent must be egocentric, because he must focus on himself in order to develop a mature sense of himself. This characteristic is part of the developmental stage. Once an identity is firmly established, then a relationship of intimacy becomes possible. Intimacy is the ability to fully share oneself with another person without fear of loss of esteem. This is the ability to give yourself away completely without losing yourself in the process of giving. Intimacy assumes a mutually-affirming affection between the partners with an emphasis on helping the other, not on getting for oneself. Erikson agrued that sexual activity was best reserved for the stage of intimacy.

This brings us to Myth #4: Adolescents can be taught the meaning of love and will engage in responsible love-making. When we reflect on the developmental task before the teenager, of learning about himself,

it is clear that they are simply not ready to deal with adult love-making.

CONCRETE OPERATOR
concrete and egocentric
Immediate sexual gratification
Self indulgence
Self Knowledge
Short-term relationship

We need to consider whether we want people to engage in sexual behavior during that time when they are primarily concerned with themselves. Sexual behavior during that time would have to serve only themselves. Sex provides the information to fulfill personal needs. But what about the needs of the partner? There will be no mutual appreciation of the other's needs or personality. The adolescent does not intentionally abuse the sexual partner. Rather, they have no understanding that the relationship could be different. They are limited because they cannot have an awareness of persons outside of the self. This would seem to be that element of maturity that we look for in the potentially successful union between a man and a woman. Anyone lacking this quality would find a permanent sexual union difficult because no one person can provide the kind of fulfillment sought by the concrete operating individual.

FORMAL OPERATOR
** mutually-affirming affection**
Sex for love and procreation
Concern for partner
Self-giving
Long-term commitments

Only with true abstract, formal reasoning can a couple establish the kind of mature, satisfying, long-term relationship, in which sexual behavior fills the role of supporting mature, mutual relationships. It

is the lack of maturity that parents sense in their young people that persuades them to argue against engaging in sexual relationships at a young age. I would argue that this immaturity is real and that sexual relationships are going to be inadequate and ultimately damaging.

In closing, a warning must be made. These developmental levels are not related directly to age. A teenager may exhibit extraordinary maturity in the face of crisis. On the other hand, many times parents will show immature behavior, arguing for the immediate resolution of the problem and ignoring completely the needs of their developing child. We must recognize such behavior for what it is: immature and self-centered. We must also realize that many of these people would behave differently if society would support them in a mature decision. We are not helpless. There are things that we can do.

Implications for Curriculum Development

First of all, we must begin to develop programs that meet the needs of the target audience. Berstein and Cowan (1981) have argued that the developmental abilities of children vary tremendously with age. They point out that even adolescents are not fully mature and that we should recognize that in setting up programs. Simply giving a large amount of information may do more harm than good. For example, my two-year-old once remarked at the table that it was good that the unborn baby was inside the Mommy's tummy because then he could eat the food that would fall into the stomach. This is truly immature thinking, and there is not much that we can do to provide a correct view for so young a child. However, her older brother attempted to do something by explaining about the difference between the uterus and the stomach. It was an excellent, text-book perfect explanation. When he was finished she said "But how will the baby eat if the food isn't falling on it." The information had been assimilated into an incomplete picture of human ahead. Introducing the umbilical cord at that point would only have produced more misunderstanding and, consequently, more misinformation. We must limit the goals of what can be accomplished and work within those limits.

Second, it is very important that a standard of maturity be established so that adolescents understand what the goal of their growth and development should be. Thus, love and sex need to be defined and discussed in their mature and immature form so that teens begin to value

the recommendation to wait. A case can be made that mature sexual behavior involves waiting until there is a strong mutually-supportive relationship of commitment and fidelity. In the last analysis, sex is a relationship, and love is a decision to give of oneself. An adolescent may not fully understand these concepts but he can be helped to value them and to use them as a justification for postponing early sexual involvement. We owe it to our adolescents to encourage them to do the most effective and mature thing. Our children usually live up (or down) to the standards we set.

Finally, we must recognize that we must use sexuality education to teach. We know that logical, mature forms of thinking can be taught. We do this when we teach math and physics. We should be able to give the guidance to help adolescents overcome their immature and egocentric thought patterns. This should be one of the goals of sexuality education.

REFERENCES

Alan Guttmacher Institute. Eleven Million Teenagers. New York: Author, 1976.

Bernstein, A. C. and Cowan, P.A. Children's conceptious of birth and sexuality. The Children's Conceptions of Health, Illiness, and Bodily Functions. Ed. by Roger Babace and Mary E. Walsh. New Directions for Child Development. William Danon, Editor-in-Chief. San Francisco. Jossey-Bass, Inc, 1981.

Boss, P. G. & Hooper, J. O. Teaching Adolescents About Parenthood. Journal of Home Economics, 1980, 72(2), 40-42.

Center for Disease Control. Abortion surveillance: Annual summary. Atlanta, GA.: Public Health Service, 1975.

Chapman, R.H. The development of children's understanding of proportions. Child Development, 2975, 46, 141-148.

Cobliner, W. Pregnancy in the single adolescent girl: The role of cognitive functions. Journal of Youth and Adolescents, 1974, 3, 17029.

Dulitt, E. Adolescent thinking a la Piaget: The formal stage. Journal of Youth and Adolescence, 1972, 1(4), 281-301.

Eddinger, L. & Forbush, J. School age pregnancy and parenthood in the United States. Washington: National Alliance Concerned with School Age Parents, 1977.

Elkind, D. Egocentrism in adolescence. Child Development, 1967, 38, 1025-1034.

Erikson, E. H. Childhood and Society, 2nd Edition, New York: W. W. Norton Co, Inc., 1963.

Freeman, E. W. Influence of personality attributes on abortion experiences. American Journal of Orthopsychiatry, 1977, 47(3), 503-513.

Ginsburg, H. & Opper, S. Piaget's Theory of Intellectual Development. 2nd Edition. New Jersey: Prentice-Hall, 1979.

Gordon, S. The case for a moral sex education in the schools. The Journal of School Health, 1981, 51, 214-218.

Hacker, S. S. It isn't sex education unless.... Journal of School Health, 1981, 51,(4), 207-210.

Kirby, D. Sexuality education: Aware realistic new of its effects. Journal of School Health, 1985, 55(10), 421-424.

Kohlberg, L. Development of moral character and moral ideology. Review of Child Development Research. Edited by M. L. Hoffman and L. W. Hoffman. Vol 1. New York: Russell Sage Foundation, 1964.

Kohlberg, L. Stage and sequence: The cognitive-developmental approach to socialization. In Handbook of Social lization Theory and Research. Edited by D. A. Goslin. Chicago: Rand McNally, 1969.

Legendre-Bergeron, M. F. & Laveault, D. Is formal thought the final stage of cognitive development: An internal criticism of Piagetian theory. The Genetic Epistemologist, 1983, 11(4), 15-20

Lewis, C. C. A comparison of minors' and adults' pregnancy decisions. American Journal of Orthopsychiatry, 1980, 50(3), 446-453.

Macklin, E. D. Education for choice: Implications of alternatives in lifestyles for family life education. Family Relations, 1981, 30, 567-577.

Melton, G. B. Toward "personhood" for adolescents: Autonomy and privacy as values in public policy. American Psychologist, 1983, 38(1), 99-103.

Mortano, S. A developmental analysis of performance on Piaget's formal operations tasks. Developmental Psychology, 1977, 13(6), 666-672.

Needle, R. Factors affecting contraceptive practices of high school and college-age students. Journal of School Health, 1977, 3, 340-345.

Scales, P. Sex education in the '70's and '80's: Accomplishments, obstacles, and emerging issue Family Relations, 1981, 30, 557-566.

Shah, F., Zelnik, M. & Kantner, J. F. Unprotected intercourse among unwed teenagers. Family Planning Perspectives, 1975, 7, 29-43.

Spinock, G., Platt, J. J. & Shure, M. B. The problem-solving approach to adjustment. San Francisco: Jossey-Bass Publishers, 1976.

Zelnick, M. & Kantner, J. First pregnancies to women aged 15-19. Family Planning Perspectives, 1978, 10, 11-20.

Zelnick, M. & Kantner, J. F. Sexual activity, contraceptives use and pregnancy among metropolitan-area teenagers: 1971-1979. Family Planning Perspectives, 1980, 12, 230-237.

Zelnick, M., Kim, J. & Kantner, J. Probabilities of intercourse and conception among U.S. teenage women, 1971 and 1976. Family Planning Perspectives, 1979, 2, 177-183.